EVAR FOR ANEURYSM RUPTURE IS SUPERIOR

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UCSF Vascular Symposium 2014

RUPTURED AAA

Tenth leading cause of death in humans over 55 years
Rupture is the most common cause of death in patients with AAA

Claims 15,000 lives a year

CASE 1

- 64 years old with severe abdominal and back pain
- No previous history of AAA
- Hypertension and Hyperlipidemia
- No History of MI
- B/P: Initial BP 50's
- Two unit of blood: 103/64
- HR 72
- ASA = 3

CASE 2

- 73 years old
- Sever back pain and hypotension
- EVAR under local anesthesia
- No leak
ENDOVASCULAR ANEURYSM REPAIR IS SUPERIOR TO OPEN SURGERY FOR RUPTURED ABDOMINAL AORTIC ANEURYSMS IN EVAR-SUITABLE PATIENTS

In EVAR-suitable patients, an absolute perioperative mortality reduction of 25.5% of rEVAR over open surgery was found, which was still present at 6 months of follow-up.

These data suggest that rEVAR is a superior treatment option for EVAR-suitable patients.

ENDOVASCULAR ANEURYSM REPAIR IS SUPERIOR TO OPEN SURGERY FOR RUPTURED ABDOMINAL AORTIC ANEURYSMS BY ENDOVASCULAR ANEURYSM REPAIR: A TWO-CENTER 14-YEAR EXPERIENCE

- Two tertiary care medical centers
- Retrospective study
- 1998-2011: total 473 patients
- Since May 2009 all EVAR whenever possible
- Standardized protocols at both centers
- Open cases: Clamp, Transaortic Pruitt balloon or later trans femoral aortic balloon cath before general anesthesia

COMPLETE REPLACEMENT OF OPEN REPAIR FOR RUPTURED ABDOMINAL AORTIC ANEURYSMS BY ENDOVASCULAR ANEURYSM REPAIR: A TWO-CENTER 14-YEAR EXPERIENCE


Bosch et al: JVS July 2010

Table 1: Baseline characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>rEVAR</th>
<th>Open</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years (SD)</td>
<td>72.2 (8.3)</td>
<td>74.1 (7.1)</td>
<td>0.042</td>
</tr>
<tr>
<td>BMI, mean (SD)</td>
<td>25.7 (5.5)</td>
<td>25.8 (4.3)</td>
<td>0.436</td>
</tr>
<tr>
<td>Cardiac failure, No. (%)</td>
<td>36/78</td>
<td>36/78</td>
<td>0.955</td>
</tr>
<tr>
<td>Percutaneous puncture, No.</td>
<td>6/147</td>
<td>6/147</td>
<td>0.875</td>
</tr>
<tr>
<td>Risk of Mortality, No. (%)</td>
<td>18/146</td>
<td>9/147</td>
<td>0.068</td>
</tr>
<tr>
<td>Aorta Denudation, No. (%)</td>
<td>9/108</td>
<td>4/106</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Aorta aortic root + PV</td>
<td>76.0 (6.7)</td>
<td>76.9 (5.4)</td>
<td>0.047</td>
</tr>
<tr>
<td>MAF = mean Hg.</td>
<td>110.9 (14.3)</td>
<td>111.9 (14.3)</td>
<td>0.692</td>
</tr>
<tr>
<td>Mean systolic (SD)</td>
<td>127.0 (22.6)</td>
<td>126.8 (22.3)</td>
<td>0.896</td>
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</table>
COMPLETE REPLACEMENT OF OPEN REPAIR FOR RUPTURED ABDOMINAL AORTIC ANEURYSMS BY ENDOVASCULAR ANEURYSM REPAIR: A TWO-CENTER 14-YEAR EXPERIENCE

**Either patient refused or Staff not available**

**Post Operative Care**
- ICU
- Bladder pressure monitoring 1-2 hours
- Heparin, DVT prophylaxis
- Ab decompression for bladder pressure >20 mm Hg or perfusion abdominal pressure < 60

**Result**
- Total# of patients: 473
- # Pt since 2009: 70
- 30 day mortality for the whole cohort (including medically managed): 37% (excluded: 25%)
- EVAR vs Open: 17.9% vs 37.4% (52% reduction)
- 2009-2011
  - 30 day mortality for EVAR: 24%
- During period 1998-2009
  - 30 day mortality 15.7 vs 37.4

**Conclusion**
- During EVAR only approach mortality was 24%
- Mortality for EVAR group when no need for abd decompression 5X less
- If abd decompression needed mortality between open and EVAR group was similar
IS EMERGENCY ENDOVASCULAR ANEURYSM REPAIR ASSOCIATED WITH HIGHER SECONDARY INTERVENTION RISK AT MID-TERM FOLLOW-UP?

- 1998-2005
- 56 emergent cases (34 rupture, 22 acute)
- 322 patient elective

<table>
<thead>
<tr>
<th></th>
<th>Rupture</th>
<th>Acute</th>
<th>Elective</th>
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<tbody>
<tr>
<td>Death @30 days</td>
<td>18%</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>Survival @ 3 years</td>
<td>62</td>
<td>76</td>
<td>86</td>
</tr>
<tr>
<td>Re-intervention @ 3 years</td>
<td>15</td>
<td>18</td>
<td>12</td>
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</tbody>
</table>

**Conclusion:**
Emergency EVAR repair did not present higher in-intervention rate.

**IMAGE SHARE PROGRAM**

**ACUTE AORTIC SYNDROME PROGRAM**

- Educating Emergency Department practitioners
YOUR OPERATING ROOM TEAM

- OR Tech
- Are all your surgeons comfortable
- Anesthesia Team
- Radiology and Imaging

DO YOU HAVE A STANDARDIZED APPROACH

- Local access for control
- Access from the arm
- Devices choices on the shelf
- Hybrid room imaging available
- Are all the faculty on the same page?

How do we measure benefit in patients treated for ruptured aneurysm?
THANK YOU!!!!